This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) A cultured skin device comprising cultured dermal cells on an outer surface of a biocompatible reticulated matrix, the dermal cells providing a cellular lamination layer for cultured epidermal cells thereon.

2. (PREVIOUSLY PRESENTED) The device of claim 1 wherein the epidermal cells are selected from the group consisting of keratinocytes, melanocytes, epidermal immunocytes, epidermal stem cells, and combinations thereof.

3. (PREVIOUSLY PRESENTED) The device of claim 1 wherein the dermal cells are selected from the group consisting of fibroblasts, endothelial cells, dermal immunocytes, nerve cells, myocytes, dermal stem cells, and combinations thereof.

4. (ORIGINAL) The device of claim 1 for therapy in a patient with a burn, a burn scar, a chronic skin ulcer, a congenital skin lesion, a metabolic disease, a protein defect, a protein deficiency, and combinations thereof.

5. (ORIGINAL) The device of claim 1 wherein the matrix is comprised of collagen.

6. (ORIGINAL) The device of claim 1 wherein the matrix consists essentially of collagen.

7. (ORIGINAL) The device of claim 1 wherein the cells are selected from the group consisting of autologous, allogenic, xenogeneic, and combinations thereof.

8. (ORIGINAL) The device of claim 1 wherein at least one cell is genetically modified.

9. (ORIGINAL) The device of claim 1 capable of engraftment to provide at least one characteristic selected from the group consisting of an epidermal barrier, basement membrane, angiogenesis, and pigmentation.

10. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising inoculating a biocompatible reticulated matrix with cultured dermal and epidermal cells, and incubating said inoculated matrix under conditions sufficient to form a cultured skin device, the dermal cells providing a cellular lamination layer on an outer surface of the biocompatible reticulated matrix for the epidermal cells.

11. (ORIGINAL) The method of claim 10 wherein conditions comprise incubating in a medium containing a component selected from the group consisting of insulin, at least one essential fatty acid, vitamin C, and combinations thereof.

12. (ORIGINAL) The method of claim 11 wherein insulin is at a concentration in the range of about 0.05 µg/ml to about 500 µg/ml.

13. (ORIGINAL) The method of claim 10 wherein the dermal cells are inoculated prior to inoculating the epidermal cells.

14. (ORIGINAL) The method of claim 10 wherein the matrix comprises collagen.

15. (ORIGINAL) The method of claim 10 wherein the matrix consists essentially of collagen.

16. (ORIGINAL) The method of claim 10 wherein the epidermal cells comprise melanocytes and the cultured skin composition restores skin pigmentation.

17. (ORIGINAL) The method of claim 10 wherein the dermal cells comprise endothelial cells and the cultured skin composition stimulates formation of blood vessels.

18. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising isolating at least a first cell type from skin, culturing the isolated cells, and inoculating the cultured cells to a biocompatible reticulated matrix by a method selected from the group consisting of submerged inoculation and lifted inoculation, and incubating said inoculated matrix under conditions to form at least one cellular lamination layer population <u>on an outer surface of the biocompatible reticulated matrix</u>.

19. (ORIGINAL) The method of claim 18 further comprising inoculating said matrix with a second cell type.

20. (ORIGINAL) The method of claim 18 wherein the cell type is selected from the group consisting of dermal cells, epidermal cells, and combinations thereof.

21. (ORIGINAL) The method of claim 18 wherein the cells are from a recipient of the skin device.

22. (ORIGINAL) The method of claim 18 wherein the cells are selected from the group consisting of allogeneic, autologous, and xenogeneic.

23. (ORIGINAL) The method of claim 18 wherein the cultured skin device is chimeric in genotype.

24. (CURRENTLY AMENDED) A method for producing a permanent cultured skin device for a burn patient comprising

isolating at least one dermal cell type and/or at least one epidermal cell type from an uninjured area of skin from a burn patient,

separately culturing the isolated dermal and/or epidermal cells,

inoculating a biocompatible reticulated matrix with the cultured dermal and/or epidermal cells and incubating the inoculated matrix under conditions to form

a cultured skin device having a cellular lamination layer on an outer surface of the biocompatible reticulated matrix within one month after inoculating the cells, and

providing the device to the patient.

25. (PREVIOUSLY PRESENTED) The method of claim 24 wherein the dermal cells are selected from the group consisting of fibroblasts, endothelial cells, dermal immunocytes, nerve cells, myocytes, dermal stem cells, and combinations thereof, and the epidermal cells are selected from the group consisting of keratinocytes, melanocytes, epidermal immunocytes, epidermal stem cells, and combinations thereof.

26. (ORIGINAL) The method of claim 24 wherein the cultured skin device restores an epidermal barrier function.

27. (ORIGINAL) The method of claim 24 wherein the cultured skin device is vascularized within two to seven days of surgical application.

28. (CURRENTLY AMENDED) A cultured skin device prepared by a method comprising

isolating at least one dermal cell type or at least one epidermal cell type from skin,

separately culturing the isolated dermal and epidermal cells,

providing the cultured dermal cells to a biocompatible reticulated matrix and incubating in Dulbecco's modified Eagle's medium containing strontium chloride (0.01 mM to 100 mM); linoleic acid/BSA (0.02 μg/ml to 200 μg/ml); insulin (0.05 μg/ml to 500 μg/ml); triiodothyronine (0.2 pM to 2000 pM); hydrocortisone (0.005 μg/ml to 50 μg/ml); a combination of penicillin (100 U/ml), streptomycin (100 μg/ml), amphotericin (0.25 μg/ml); ascorbic acid-2-phosphate (0.001mM to 10 mM), progesterone (0.1 nM to 1000 nM) and epidermal growth factor (0.01 ng/ml to 100 ng/ml) for about 24 hours, and

thereafter providing the cultured epidermal cells on the cellular lamination layer of dermal cells on the outer surface of the matrix to form the cultured skin device.

29. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising

inoculating a biocompatible reticulated matrix with cultured dermal cells,

incubating the inoculated matrix under conditions to form a cellular lamination layer of dermal cells on an outer surface of the biocompatible reticulated matrix,

inoculating cultured epidermal cells on the dermal cell lamination layer, and

incubating under conditions sufficient to form a cultured skin device.

30. (ORIGINAL) The method of claim 29 wherein said matrix is dehydrated to form a crosslinked matrix before inoculating with cultured dermal cells.

31. (ORIGINAL) The cultured skin device of claim 29 wherein the matrix is comprised of collagen.

32. (CURRENTLY AMENDED) A method of inoculating a matrix with a cell suspension comprising

providing a reticulated matrix overlying an absorbent material, the material saturated with a cell culture medium,

thereafter providing cells suspended in a volume of culture medium to a top surface of the matrix under conditions sufficient to draw the medium through the absorbent material and deposit the cells <u>on</u> [[in]] the matrix to form a cellular lamination layer <u>on an outer surface of the matrix</u>.

33. (ORIGINAL) The method of claim 32 wherein the undersurface of the reticulated matrix is in contact with a substantially non-adherent, non-cytotoxic surface.

34. (NEW) A method for producing a permanent cultured skin device for a patient comprising

isolating at least one dermal cell type and/or at least one epidermal cell type from an uninjured area of skin from the patient,

separately culturing the isolated dermal and/or epidermal cells,

inoculating a biocompatible reticulated matrix with the cultured dermal and/or epidermal cells and incubating the inoculated matrix under conditions to form a cultured skin device having a cellular lamination layer on an outer surface of the biocompatible reticulated matrix within one month after inoculating the cells, and

providing the device to the patient.

35. (NEW) The method of claim 34 wherein the patient is burned.

36. (NEW) The method of claim 34 wherein the patient has a chronic wound.

37. (NEW) The method of claim 34 wherein the patient is a candidate for an elective surgery of the skin.